

REMARKS

Claims 1-9 are pending in the present application. In the Office Action, claim 5 was rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. In particular, the Examiner asserts that it is not clear how seismic data is inverted using theoretical or optimal seismic source output. However, Applicants respectfully submit that the Examiner has merely stated the conclusion and has not provided an analysis as to why the phrases used in claim 5 are, in the Examiner's view, "vague and indefinite." In particular, the Examiner has provided no reason why a person of ordinary skill in the art could not interpret the metes and bounds of claim 5 so as to understand how to avoid infringement, as required by MPEP §2173.02.

Moreover, Applicant submits that, in light of the present application, it is clear how seismic data is inverted using theoretical or optimal seismic source output. For example, in one embodiment, seismic data may be inverted using a High Frequency Vibroseis Source (HFVS) method. See Patent Application, pages 2-4. Thus, Applicant respectfully submits that claim 5 is definite and requests that the Examiner's rejection of claim 5 under 35 U.S.C. § 112, second paragraph, be withdrawn.

In the Office Action, claims 1-4 and 6-9 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by "Recent Developments in 3-D Acquisition Techniques Using Vibroseis in Omam," by Wams, et al (Referred to hereinafter as the Wams article). The Examiner's rejections are respectfully traversed.

In one embodiment of the present invention, illustrated in Figure 2, Applicant describes deploying seismic sources V_1 , V_2 , V_3 , and V_4 at source points 48, 50, 52, and 54, respectively.

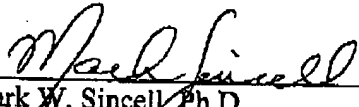
The seismic sources V_1 , V_2 , V_3 , and V_4 are simultaneously actuated and then data is acquired by seismic sensors 40. The seismic sources V_1 , V_2 , V_3 , and V_4 are then redeployed at source points 50, 52, 54, and 56, respectively. Thus, with regard to independent claim 1, Applicant claims a method of seismic surveying using a plurality of vibratory seismic sources that includes redeploying said seismic sources so that at least one of them is positioned at a source point previously occupied by another of them.

In contrast, the Wams article describes a method of conducting a seismic survey known as a "slip sweep" technique. In the slip sweep survey, a vibrator group starts sweeping without waiting for another vibrator group to stop sweeping. The two sweeps are later correlated to form a long composed record. See, Wams, page 1054 and Figure 5. The Wams article describes two possible source-geophone geometries: a single zig-zag and a double zig-zag. See Wams, Figure 3. However, the Wams article does not appear to describe or suggest a method of seismic surveying using a plurality of vibratory seismic sources that includes redeploying said seismic sources so that at least one of them is positioned at a source point previously occupied by another of them. In particular, the vibrator groups shown in Figure 3, *i.e.* Source 1 and Source 2, appear to follow paths that are selected to *prevent* a vibrator group from occupying a source point previously occupied by another vibrator group. Thus, Applicant respectfully submits that the Wams article does not anticipate independent claim 1, or any claims depending therefrom, and requests that the Examiner's rejections of claims 1-4 and 6-9 under 35 U.S.C. § 102(b) be withdrawn.

For the aforementioned reasons, it is respectfully submitted that all claims pending in the present application are in condition for allowance. The Examiner is invited to contact the undersigned at (713) 934-4052 with any questions, comments or suggestions relating to the referenced patent application.

Respectfully submitted,

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